

銅的特性 / The Properties of Copper

其最佳特性：高導電與高導熱性僅次於“銀”金屬，位居金屬第二。

耐腐蝕性：銅的標準電極電位為 +0.345V，比氫高，故在水溶液中不能置換成氫。因此銅在許多介質中化學穩定性好。而在大氣中，銅能在表面自然生成難溶於與基底緊密結合的 (CuSO₄·3Cu(OH)₂)，即稱銅綠) 薄膜，自然對銅的保護作用，可防止銅繼續深入性的腐蝕。

故於導電性，取決性、加工性、耐腐蝕性，均優條件下常被作用於：導線、電纜、家電、作用電器、多媒體... 等，更無形不在於生活周邊的 4(C)=Communication(通訊類)、Consumer Electronics(消費性電子)、Computer(電腦)、Car(汽車電子)的產業鏈。

其化學性：於氧化性的酸(鹽酸)、有機酸(醋酸、檸檬酸、脂肪酸、乳酸、草酸)有良好的耐蝕性。

但非氧化性的酸(硝酸)就不具耐蝕特性了，而氨、氯化銨、氰化物、汞鹽的水溶液或濕潤的鹵素族元素等均會引起銅的強烈腐蝕。

(銅在常溫下乾燥空氣中幾乎不氧化但溫度超過時，會加速氧化而生成紅色之Cu₂O薄膜)

It has a best feature: Its high electrical conductivity and high thermal conductivity are second only to "silver", ranking the second highest among all metals.

Resistance to corrosion: Copper has a standard electrode potential of +0.345V, which is higher than hydrogen, so in a water solution, it could not be converted to hydrogen. Therefore, copper has excellent chemical stability among all media. In the atmosphere, copper can form on its surface a thin film of CuSO₄·3Cu(OH)₂ (also known as copper green), which cannot be dissolved with its substrate, serving as a protective layer to prevent further corrosion of the copper core.

Therefore, due to its superior characteristics including electrical conductivity, dependability, machinability and resistance to corrosion, it is often applied to: conductive wire, electric cable, electrical household, multi-media products, as well as industrial chains close to our living circles: 4(C) = Communication, Consumer Electronics, Computer and Cars.

Chemical properties: it has good resistance to corrosion when exposed to Hydrochloric acid or Organic acid (Acetic acid, Citric acid, Fatty acid, Lactic acid, Oxalic acid). But it does not have resistance to corrosion when exposed to non-oxidizing acid (Nitric acid). Strong corrosion will occur when it is exposed to Ammonia, Ammonia chloride, Cyanide, Mercuric salt water solution or moist halogen-group elements.

(At room temperature and in dry air, copper will almost not oxidize. But when the temperature exceeds 100 degrees Celsius, it will expedite oxidization and produce a thin red film of Cu₂O.)

貫徹滿意品質，締造永續服務
Implement satisfactory quality for a substantial business

銅加工藝 / Copper Ware

銅加工藝品：可被加工為銅棒、銅管、銅線、銅板(帶)以及鑄造不規則多形態的銅飾品等。

Copper ware: it can be processed to obtain copper rods, copper pipes, copper wires, copper coin (band), and cast into irregular-shaped decorative items.

CDA系列 CDA series	成分取決，特性作用 Determination of ingredients, characteristic actions
1XXXX	稱為高銅，含銅量在95%以上為取決條件 High copper, having a copper content of 95% or more
2XXXX	銅鋅合金(Brass)，以含鋅量做為取決條件 Copper zinc alloy (Brass), dependent on its zinc content
3XXXX	加了(鉛)的銅合金，用於切削性較好的加工作用 Copper alloy with added lead, used for machining with better cutting Performance
4XXXX	特殊銅合金(以銅、錫、鋅)三合金以上合成取決之 Special copper alloy, containing at least three (copper, tin, zinc) elements
5XXXX	主以銅錫合金取決之，以磷銅(Phosphor Bronze)稱之 Bronze, copper and tin alloy, depending on its tin content
6XXXX	為銅鋁合金較多，以含鋁成分取決而之 Copper aluminum alloy, depending on its aluminum content
7XXXX	以銅鎳合金為主，以含鎳成分為取決之系列合金 Mainly copper nickel alloy, depending on its nickel content
8XXXX	該系列為鑄造加工藝專用銅
9XXXX	This series is copper specifically for casting and machining purposes



誠信用心為經，創新科技為緯
Honesty, attentive, and innovative technology at hearts